

NON-PUBLIC?: N
ACCESSION #: 9309170019
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Millstone Nuclear Power Station Unit 2 PAGE: 1 OF 03

DOCKET NUMBER: 05000336

TITLE: Reactor Trip Due to Low Steam Generator Level
EVENT DATE: 08/12/93 LER #: 93-019-00 REPORT DATE: 09/10/93

OTHER FACILITIES INVOLVED: N/A DOCKET NO: 05000

OPERATING MODE: 2 POWER LEVEL: 002

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR
SECTION:
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: William J. Temple, Site Licensing TELEPHONE: (203) 437-5904

COMPONENT FAILURE DESCRIPTION:
CAUSE: SYSTEM: COMPONENT: MANUFACTURER:
REPORTABLE NPRDS:

SUPPLEMENTAL REPORT EXPECTED: No

ABSTRACT:

On August 12, 1993, the plant was operating in Mode 2. At 13:44 a reactor trip occurred due to low Steam Generator (SG) level. Approximately one hour prior to the trip the plant had entered mode 2 (reactor critical) and SG levels were being maintained by one auxiliary feedwater pump. Reactor power had just been increased to 2% and preparations were being made to start a main feedwater pump and begin the turbine warming process. Following the reactor trip Emergency Operating Procedure EOP 2525, Standard Post Trip Actions, was performed. All safety related equipment responded as expected, and the unit was placed in a stable condition.

END OF ABSTRACT

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I. Description of Event

On August 12, 1993, the plant was operating in Mode 2. At 13:44 a reactor trip occurred due to low Steam Generator (SG) level. Approximately one hour prior to the trip the Plant had entered mode 2 (reactor critical) and SG levels were being maintained by one auxiliary feedwater pump. Reactor power had just been increased to 2% and preparations were being made to start a main feedwater pump and begin the turbine warming process. Following the reactor trip Emergency Operating Procedure EOP 2525, Standard Post Trip Actions, was performed. All safety related equipment responded as expected, and the unit was placed in a stable condition.

II. Cause of Event

The root cause of this event was operator inattention to Steam Generator Level during plant transient conditions. As power levels were increased to 2%, no adjustments were made to increase feedwater flowrates for a 20-minute time period. This caused SG levels to decrease over this time period. A SG level deviation alarm was initiated, but apparently not noticed by the control board operator. A contributing cause of this event was the control rooms' response to a high service water now condition on one of the reactor building closed cooling water heat exchangers and a cycling condenser steam dump valve. When the low SG level alarm was received, a second auxiliary feedwater pump was started, but the addition of cold auxiliary feedwater caused a further SG water level decrease due to "shrink," with the final result being the reactor trip on low SG water level.

III. Analysis of Event

This LER is submitted in accordance with 10CFR50.73(a)(2) (iv), any event or condition that results in a manual or automatic actuation of any engineered safety feature (ESF), including the reactor protection system (RPS).

The safety consequences of this event are minimal since the plant safety equipment functioned as expected. Following the reactor trip, Emergency Operating Procedure EOP 2525, Standard Post Trip Actions, was followed. All plant parameters responded as expected. Upon completion of Standard Post Trip Actions, EOP 2525, Reactor Trip Recovery, was implemented. All Safety Function Status Checks were performed without note.

IV. Corrective Action

Temporary short term corrective action was a shift briefing of the event to each operating shift as they assumed the watch. This brief included the following requirements for the subsequent specific start-up.

- 1) The Supervising Control Operator (SCO) shall be notified of all alarms.
- 2) The SCO/Secondary Plant Operator (SPO) will trend all SG levels on the control room display monitor.
- 3) One licensed operator has been dedicated to SG level control.

Long term corrective actions include:

A review of the event has been completed with all Operations Personnel at shift briefings.

A formal Operations Department communication standard has been issued that reinforces the need for feedback and accurate two way communication. This reinforces the requirements that all changes in the plant conditions and all valid alarms shall be brought to the attention of the SCO.

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The Operations procedure for reactor start-up (OP 2202) has been revised to clarify the transition between reactor start-up and plant start-up. The plant start-up procedure (OP 2203) has been revised to add a caution note to prompt the addition of feedwater flow to maintain SG levels after reactor power is increased above the point of adding heat.

An evaluation of the SG low level and Reactor Protection System (RPS) pretrip values for low SG level has been initiated. This evaluation will determine if changes to the alarm setpoints are appropriate.

This event will be scheduled for review by licensed operators as part of licensed operator requalification training.

V. Additional Information

There were no failed components.

EIIS Codes:

JB ALL Feedwater/Steam Generator Water Level Control Systems

Similar LERs: 87-009-02

ATTACHMENT 1 TO 9309170019 PAGE 1 OF 1

NORTHEAST UTILITIES

NU The Connecticut Light And Power Company

Western Massachusetts Electric Company

Holyoke Water Power Company

Northeast Utilities Service Company

Northeast Nuclear Energy Company

General Offices - Selden Street, Berlin Connecticut

P.O. BOX 270

HARTFORD, CONNECTICUT 06141-0270

(203)665-5000

September 10, 1993

MP-93-718

Re: 10CFR50.73(a)(2)(iv)

U.S. Nuclear Regulatory Commission

Document Control Desk

Washington, D.C. 20555

Reference: Facility Operating License No. DPR-65

Docket No. 50-336

Licensee Event Report 93-019-00

Gentlemen:

This letter forwards Licensee Event Report 93-019-00 required to be

submitted within thirty (30) days pursuant to 10CFR50.73(a)(2)(iv). Specifically, a reactor trip occurred due to low steam generator water level.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

Stephen E. Scace

Vice President - Millstone Station

SES/SS:ljs

Attachment: LER 93-019-00

cc: T. T. Martin, Region I Administrator
P. D. Swetland, Senior Resident Inspector, Millstone Unit Nos. 1, 2
and 3
G. S. Vissing, NRC Project Manager, Millstone Unit No. 2

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